



United States Environmental Protection Agency
One Congress Street, Suite 1100 (HBT)
Boston, MA 02114-2023

February 1, 2002

Mr. Ed Boyle
DoN, Northern Division - NAVFAC
10 Industrial Highway
Code 1811/EB - Mail Stop 82
Lester, PA 19113-2090

Re: "Final Work Plan Addendum No. 02 for Subsurface Investigation at Building 41 for Remedial Investigation of IR Program Site 16", dated January 2002, at the former Naval Construction Battalion Center (NCBC) Davisville, RI

Dear Mr. Boyle:

Pursuant to § 7.6 of the Davisville Naval Construction Battalion Center Federal Facility Agreement dated March 23, 1992, as amended (FFA), the Environmental Protection Agency has reviewed the subject document. Comments are enclosed.

In general EPA agrees with the Navy's proposal. However, we believe the additional boring(s) should be located based on data gathered at the A&B locations. Please keep EPA informed as to the planned start date and as to the results of the headspace analysis on a daily basis.

If you have any questions with regard to this letter, please contact me at (617) 918-1384.

Sincerely,

A handwritten signature in cursive script, reading "Christine Williams", is written over the typed name.

Christine A.P. Williams, RPM
Federal Facilities Superfund Section

cc: Richard Gottlieb, RIDEM
Dave Barney, CSO
Bill Brandon, EPA
Steve DiMattei, EPA
Marilyn Cohen, ToNK
Howard Cohen, RIEDC
Anne Heffron, Enviro-Tech
Dinalyn Spears-Audette, Narragansett Tribe
Kathleen Campbell, CDW
Jim Shultz, EA Engineering, Science and Technology

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EPA COMMENTS ON BUILDING 41 INVESTIGATION -WINTER 2002

1. Page 2 of 12, Section 3, First Bullet: As discussed in previous correspondence and meetings, the chlorinated hydrocarbon compounds detected in the deep groundwater may be due to a release of solvents in the vicinity of the eastern portion of Building 41.

A review of photoionization (PID) detector readings for the soil boring MW-16-14D did not indicate elevated readings above the bedrock interface (59 feet below ground surface). The log for MW16-15D, however, indicated elevated PID readings for the interval from 46 to 56 feet below ground surface.

Also, although previously eliminated as a potential source of the observed chlorinated hydrocarbon contamination in deep groundwater, the area to the north of the building may have been a/the contributing source of the observed groundwater contamination in the deep aquifer. The soil boring data in the vicinity of the former leach field MW-16-9D and MW-11D indicated elevated PID readings at shallower depths (ranging from 4 to 16 feet below ground surface).

Any chlorinated hydrocarbons released to groundwater could have been carried to depth as groundwater migrated to the southeast. This may be reflected by the Membrane Interface-Probe (MIP) readings to the east of this location (MIP16-S01 and MIP16-S03) and southeast (MIP 16-S05, MIP 16-S10 and MIP 16-S11). These locations had mid to high readings at elevations ranging from approximately the 42 to 62 feet below ground surface interval. This suggests that chlorinated compounds could have migrated downward from a surface location inside, outside of, or next to the building. See comment below for a suggestion to deal with this uncertainty.

2. Page 3 of 12, Section 3.0, Second and Third Bullets: It may be worthwhile to use the third soil boring to investigate for a third source area, or expand the investigation near the current A & B locations. Then depending upon the results from those soil borings complete an additional soil boring, if necessary. For instance, if chlorinated compounds are not detected at the former degreaser pit or cosmoline tank areas, the probability of detecting released chlorinated hydrocarbons at the currently proposed third location would appear to be low, based upon description of past operations in Building 41. However, since the head space analysis indicates that the TCE has migrated from somewhere to its present locations in the MW-16-14 and MW-16-15 vicinity, additional areas may need to be investigated in order to determine the source of this contamination. Please keep EPA informed as to the planned start date of the investigation and as to the results of the headspace analysis every day.

3. Page 2 and 3 of 12, Section 3.0, Third and Fourth Bullets: Borings A and B are proposed for areas "adjacent to" the backfilled areas of the former vapor degreaser pit and former Cosmolene tank pit, respectively. Rather than drilling adjacent to these features, every effort should be made to drill directly through the pits/backfill so as to access the subsurface directly beneath the former structures as leakage would *most likely* be present here. If compelling evidence exists and does not allow for directly targeting these features of interest, then the

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borings should be located as close to the backfilled areas as possible. The Navy should also consider an additional soil boring targeted to the former solvent recovery still. Evidence of shallow contamination to the north of the building further suggests the potential for a release to the shallow subsurface in this area.

4. *Page 4 of 12, Section 4.1.2:* The Navy is proposing to analyze samples for VOCs only. This information will show us if the TCE plume has a source in the sample locations. However, EPA is concerned that if there was a leak from the Cosmolene (Cosmolene?) Tank, the very heavy petroleum molecules would not be reported by the analytical method proposed. It is recommended that this work plan include some provisions for testing the soil for Cosmolene. For example, analyzing soil samples using a hydrocarbon fingerprint analysis using either a Cosmolene standard or some Cosmolene that still exists (in soils at MW16-07?) at NCBC. Another approach would be to test and/or screen for TPH (soxhlet extraction versus sonication) to determine if Cosmolene is present in the subsurface soil. A different type of suggestion is for the laboratory, using the proposed method, to allow the samples to elute on the GC for 2-3 times as long as is usually done in order to see any TICs that may be indicative of heavy petroleum. In addition, it would be useful to compare the chromatograph from samples taken under the Cosmolene Tanks to the chromatographs of the samples taken at location MW-16-07. A heavy petroleum smell was encountered during drilling, but the VOC and SVOC analysis on the groundwater and soils did not report a high contaminant level. Perhaps the contamination at MW16-07 was Cosmolene, or creosote which also would not be reported as part of the VOC, SVOC lists, but would be seen on longer eluting chromatographs.

In order to determine if material encountered at Building 41 is Cosmolene, the Navy should procure some Cosmolene to use as a comparable standard as it is still used as a metal preservative.

5. *Page 4 of 12, Section 4.1.2:* This Work Plan does not include the reporting limits for the VOCs or the fact that data validation will be performed. If the reporting limits for the VOCs, and the level of data validation is the same as in the Site 16 RI QAPP, then a reference to that QAPP (in Section 4.1.2 of the Work Plan) is sufficient.

6. *Page 7 of 12, Section 4.1.4.2:* If a release is documented at the proposed locations, the data collected from the soil profile should reflect this. However, it may be possible that chlorinated solvent exists in the shallow bedrock, possibly as a dense, non-aqueous phase liquid (DNAPL), without being indicated by chlorinated compounds in the overlying soil column (especially if the soil borings are located outside the footprint of the solvent use areas). What provisions will be made for evaluating the presence of chlorinated compounds in the bedrock, either the three feet to be advanced by rotary drilling or the five feet that will be cored? Will the cuttings, rock core recovered and/or drilling fluid be screened with a PID? Would it be possible to collect/retain solid-phase cuttings for analysis if PID readings are elevated? If soil cuttings are insufficient,

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then perhaps provisions could be made to collect a grab sample from the weathered and/or competent bedrock zones for analysis ?

7. *Page 12, Section 4.5 Investigative Waste Management:* This section appears to have been omitted from the Work Plan. The backside of Page 11 (Page 12) was blank.